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January 16, 1893.

North Carolina

Agricultural Experiment Station,

Bulletin No. 88

FERTILIZER ANALYSES, AND THE FERTILIZER CONTROL.

WITH ALL ANALYSES MADE IN SPRING AND FALL OF 1892.

Publications will be sent to any address in North Carolina upon application.

N. C. COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

NORTH CAROLINA

AGRICULTURAL EXPERIMENT STATION

AND STATE WEATHER SERVICE,

UNDER THE CONTROL OF THE

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FERTILIZER ANALYSES, AND THE FERTILIZER CONTROL, INCLUDING ANALYSES MADE DURING THE SPRING AND FALL SEASONS OF 1892.

H. B. BATTLE, *Director.*

To meet a demand for the completed list of all fertilizers on sale in North Carolina and analyzed during the year 1892, this bulletin is issued in advance of the opening of the Spring season of 1893. It contains results of analyses of all samples taken in both Spring and Fall of 1892, when these fertilizers are out of the hands of the manufacturers and in the hands of the local dealers. Fall samples are designated by the letter "F."

For the Spring season of 1893, results of analyses will be published every two weeks, but will only be mailed to those specially applying for them. One application only is necessary for the whole season.

VALUATIONS FOR 1893 are slightly higher than for the past year of 1892. Ammoniates have advanced in price, which necessitated an advance of 2 cents per pound for the ammonia in these ingredients. While for 1892 the valuation was 13 cents, it is now 15 cents per pound, the potash and available phosphoric acid each remaining the same, and are 5 cents per pound for both 1892 and 1893. The valuations for 1893 consequently will be:

For Available Phosphoric Acid	5 cents per pound.
For Ammonia	15 cents per pound.
For Potash	5 cents per pound.

The 1893 valuation are used in calculating the relative seaboard valuation of the ingredients by the various analyses in the following tables.

The figures mean the *actual retail cost for cash of the ingredients in bags at the seaboard.* It does not include the cost of mixing these ingredients, nor of branding the bags, nor of handling the mixed fertilizer, nor any expenses contingent upon the management of an extensive fertilizer manufactory. When purchased in large lots at wholesale, the price would be even less than those used. For mixing, branding, and incidental manufacturing costs, $2.60 per ton would be about the figure to add to the commercial valuation per ton, to arrive at the approximate cost of the completed fertilizer to the manufacturers ready for shipment at the seaboard. A farmer when he buys a fertilizer, by glancing at the commercial valuation, as given by the Experiment Station, can see what is the *actual cash worth of the unmixed ingredients composing it at the seaboard,* and what over and above this value is charged him for profit, handling, agent's fees, etc. For interior points, freight to those points from the seaboard must be added. For convenience in calculating the value at interior points, a correct table of freight rates is given on page 5.

Analyses will be made for farmers from samples that they take from lots of not less than three tons, provided the samples are taken according to printed forms which will be supplied on application to the Experiment Station. If it is desired, the name of the brand and

of the manufacturer and the guaranteed claim, may be omitted at the time the sample is sent, but must be returned to the Station after the analyses is received.

As will be seen by the digest of the laws given below, any fertilizer falling materially below the guarantee is liable to seizure and condemnation. As in many cases the analysis is not completed before the particular lot is sold, the only way to reach such a special case when the grade is too far below the guarantee, is to publish the results so that the public can be warned in the future.

DIGEST OF FERTILIZER LAWS IN FORCE IN NORTH CAROLINA, 1893.

In order to give a short and concise statement of all laws now in operation in regard to the fertilizer inspection and control, the following carefully prepared digest of existing laws is inserted, as a guide to the fertilizer trade, and for the information of the farmers:

No manipulated guanos, superphosphates, commercial fertilizers or other fertilizing material shall be sold or offered for sale unless a tonnage charge of twenty-five cents per ton has been paid. Each barrel, package or bag shall have attached a tag representing this fact, which tags are issued by the Commissioner of Agriculture according to regulations prescribed by the Department of Agriculture. The Department of Agriculture has power at all times to have samples collected of any fertilizer or fertilizing material on sale, which must be taken from at least ten per cent. of the lot selected. These samples are taken from the goods in the hands of dealers after they are shipped from the manufactories, and accordingly represent the true grade of fertilizers offered for sale.

Every package of fertilizer offered for sale must have thereon a plainly printed label, a copy of which must be filed with the Commissioner of Agriculture, together with a true sample of the fertilizer which it is proposed to sell, at or before the shipment of such fertilizer into the State, and which label must be uniformly used and not changed during the year. This label must set forth the name, location and trade-mark of the manufacturer, also the chemical composition of contents, and real percentage of the ordinary ingredients, together with date of analization, and that all charges have been paid. There must be no variation in the guaranteed percentages, but the bags must be branded with the exact chemical composition of the contents.

It is a misdemeanor and a fine of $10 for each bag, for an agent or dealer to offer for sale any such fertilizer or fertilizing materials not properly tagged, or a consumer to remove it, or a railroad agent to deliver it. Goods kept over from last season must be tagged to represent this fact, and all dealers are required to report the amount on hand at the close of the fiscal year on November 30th. No fertilizers can be sold with a content less than 8 per cent. of available phosphoric acid, 2 per cent. of ammonia and 1 per cent. of potash. The following articles are exempt: Land plaster, agricultural lime, oyster-shell lime, marl, and cotton-seed meal when not sold as a fertilizer; also materials in bulk, when sent to manufacturers for mixing in fertilizers.

Any fertilizer that is spurious and does not contain ingredients as represented by the label, is liable to seizure, and after being established on trial, its value is recoverable by the Board of Agriculture. Any person who offers for sale fertilizers or fertilizing material without having attached thereto labels as provided by law is liable to a fine of $10 for each separate package, one-half, less the cost, going to the party suing, and the remainder to the Department; and if such fertilizer is condemned, the Department makes analysis of the same and has printed labels giving the true chemical ingredients of the same put on each package, and fixes the commercial value at which it may be sold. The Department of Agriculture can require agents of railroads and steamboat companies to furnish monthly statements of the quantity of fertilizers transported by them. The Experiment Station analyzes samples taken by the official inspectors, and publishes the results when deemed needful.

FREIGHT RATES FROM THE SEABOARD TO INTERIOR POINTS.

CORRECTED TO JANUARY 16, 1893, FROM THE PUBLISHED RATES OF THE ASSOCIATED RAILWAYS OF VIRGINIA AND THE CAROLINAS.

In Car loads, of not less than 10 tons each, per ton of 2,000 pounds. Less than Car load, add 20 per cent.

DESTINATION.	From Wilmington N C.	From Norfolk and Portsmouth Va.	From Charleston. S. C	From Richmond, Va.
Asheville	$4 00	$4 60	$4 60	$4 00
Chapel Hill	3 20	3 80	4 40	3 20
Charlotte	3 00	3 20	3 20	3 20
Clayton	2 70	3 00	4 20	3 00
Dallas	3 40	4 00	3 40	3 50
Davidson College	3 90	4 50	4 40	3 90
Dunn	2 40	3 00	3 95	3 00
Durham	3 00	3 00	4 20	3 00
Elm City	2 40	2 90	3 90	2 90
Fair Bluff	2 10	3 80	2 85	3 80
Fayetteville	1 60	3 00	3 00	3 00
Forestville	3 30	3 00	4 30	3 00
Gastonia	3 40	4 10	3 40	3 60
Gibson's	2 70	4 00	2 70	4 00
Goldsboro	2 10	3 00	3 65	3 00
Greeensboro	3 00	3 00	3 80	3 00
Hamlet	2 65	3 20	4 00	3 20
Henderson	3 30	3 00	4 30	3 00
Hickory	4 00	4 60	4 60	4 00
Kinston	2 20	2 50	3 75	2 50
Laurel Hill	2 60	3 80	4 00	3 80
Laurinburg	2 60	3 80	4 00	3 80
Liberty	2 50	3 60	3 80	3 60
Louisburg	3 30	3 00	4 30	3 00
Lumberton	2 20	3 80	3 70	3 80
Madison	3 20	3 20	4 20	3 20
Matthews	3 00	3 20	3 20	3 20
Maxton	2 20	3 80	3 50	3 80
Monroe	3 00	3 20	3 20	3 20
Morven	2 70	3 85	2 70	3 85
Mt. Airy	3 20	3 50	4 20	3 50
Newbern	2 40	3 30	3 95	3 30
Oxford	3 50	3 60	4 50	3 00
Pineville	3 20	3 95	3 20	3 45
Pittsboro	2 70	3 30	4 40	3 30
Raleigh	2 70	3 00	4 20	3 00
Reidsville	3 75	3 00	4 50	2 40
Rockingham	2 70	3 20	4 00	3 20
Rutherfordton	3 40	3 65	3 40	3 65
Salisbury	3 50	3 80	4 20	3 20
Sanford	2 20	3 00	3 80	3 00
Selma	2 40	3 00	3 95	3 00
Shelby	3 40	3 60	3 40	3 60
Siler City	2 40	3 60	3 80	3 60
Smithfield	2 40	3 00	3 95	3 00
Statesville	3 20	3 80	4 40	3 20
Tarboro	2 00	2 50	3 55	2 50
Wadesboro	2 70	3 20	2 70	3 20
Walnut Cove	3 20	3 20	4 50	3 20
Warsaw	2 00	3 20	3 55	3 20
Weldon	2 45	2 00	4 00	2 00
Wilson	2 40	2 90	3 90	2 90
Winston-Salem	3 00	3 00	4 20	3 00

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
7214 7231 F7667	Acme Acid Phosphate.....	Acme Manufacturing Company, Wilmington, N. C.	Maxton ..... Laurinburg .... Wilkesboro	1
7213 7230	Acme Fertilizer.....	Acme Mfg. Co., Wilmington, N. C..	Floral College... Laurinburg.....	2
F7676	Adair's Ammoniated Dissolved Bone,	A. D. Adair & McCarty Bros., Atlanta, Ga.	Elkin	3
F7673	Adair's Formula for Wheat...	A. D. Adair & McCarty Bros., Atlanta, Ga.	Elkin	4
7318 F7668	Allison & Addison Acid Phosphate,	Allison & Addison, Richmond, Va.	Wilson ..... Lexington	5
7460 7171	Americus Brand Ammoniat'd Bone Superphosphate,	Williams & Clark Fertilizer Co., New York, N. Y.	Advance..... Wilmington	6
7297	Ammoniated Cotton Fertilizer 2 per cent.,	Navassa Guano Co., Wilmington, N. C.	Mt. Olive.....	7
7527	Ammoniated Roanoke Superphosphate,	Chesapeake Guano Co., Baltimore, Md.	Wake Forest.....	8
7237	Ammoniated Soluble Navassa Guano,	Navassa Guano Co., Wilmington, N. C.	Wadesboro	9
7298	Anchor Brand Fertilizer.....	Allison & Addison, Richmond, Va.	Kinston.....	10
7391	Anchor Brand Tobacco Fertilizer,	Allison & Addison, Richmond, Va.	Stem.....	11
7236	Ashley Soluble Guano	Ashley Phosphate Co., Charleston, S. C.	Wadesboro.....	12
7270	Ashepoo Acid Phosphate.....	Ashepoo Phosphate Co., Charleston, S. C.	Monroe.....	13
7493	Ashepoo Fertilizer.....	Ashepoo Phosphate Co., Charleston, S. C.	Monroe.....	14
7241	Atlantic Acid Phosphate.....	Atlantic Phosphate Co., Charleston, S. C.	Wadesboro	15
F7700	Banner Fertilizer.....	Reidsville Fertilizer Co., Reidsville, N. C.	Greensboro	16
7192	Baugham & Bragaw High Grade Acid Phosphate,	Baugham & Bragaw, Washington, N. C.	Washington.....	17
7503	Baugh's Acidulat'd Phosphate Rock,	Baugh & Son's Co., Baltimore, Md	Mt. Olive.....	18
7160 F7688	Baugh's Animal Bone and Potash Compound,	Baugh & Son's Co., Baltimore, Md...	Newbern..... Greensboro	19
7204 F7683	Baugh's Bone Meal.	Baugh & Son's Co , Baltimore, Md...	Clinton ..... Greensboro	20
7201	Baugh's Dissolved Animal Bone,	Baugh & Son's Co., Baltimore, Md...	Clinton.....	21
7202	Baugh's High Grade Dissolv'd South Carolina Rock,	Baugh & Son's Co., Baltimore, Md...	Clinton.....	22

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Nitrogen.	Equivalent to Ammonia		Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
1	18.38	2.12	9.13	2.49	11.62	12	.....	.....	.....	.....	.....	$ 12.00	$ 11.62
	16.00	2.20	9.04	2.97	12.01		.....	.....		.....	.....		12.01
	21.25	1.68	9.27	2.69	11.96		.....	.....	.....	.....	.....		11.96
2	14.98	.99	5.62	2.32	7.94	8	2.47	3.00	3	2.25	2½	19.50	19.19
	14.30	1.16	5.77	2.19	7.96		2.46	2.99	2	2.32			19.25
3	19.26	1.98	5.69	3.49	9.18	8	2.06	2.50		1.15	1	15.00	17.83
4	17.00	1.16	7.04	4.23	11.27	10	.....	.....	.....	3.09	2	12.00	14.36
5	17.25	.91	9.12	2.81	11.93	12	.....	.....	.....	.....	.....	12.00	11.93
	13.98	1.57	6.01	5.62	11.63		.....	.....	.....	.....	.....		11.63
6	17.25	.58	6.15	3.25	9.40	8	1.98	2.40	2	1.25	1	15.00	17.85
	17.50	2.14	4.82	3.18	8.00		2.09	2.54		1.64			17.26
7	14.32	2.52	4.20	4.92	9.12	8	1.90	2.31	2	2.21	2	16.00	18.26
8	17.95	1.43	6.72	2.31	9.03	8	1.74	2.11	2	1.27	1¼	15.25	16.68
9	8.90	2.83	5.53	3.41	8.94	8	2.49	3.02	2½	2.72	2	17.50	20.72
10	18.40	2.28	7.01	1.94	8.95	8	1.85	2.25	2	1.55	1½	15.50	17.25
11	14.75	2.71	7.20	1.72	8.92	8½	2.69	3.27	3	2.23	1½	19.00	20.96
12	16.97	1.62	5.41	3.00	8.41	8	2.32	2.82	2½	1.62	1	16.50	18.49
13	13.60	3.07	7.88	2.38	10.26	10	.....	.....	.....	.....	.....	10.00	10.26
14	16.00	1.93	6.86	2.19	9.05	8	2.00	2.43	2	1.88	1	15.00	18.22
15	14.50	1.10	10.58	1.39	11.97	10	.....	.....	.....	1.58	1	11.00	13.55
16	12.16	1.70	5.50	2.13	7.63	8	1.66	2.02	2	2.66	1	15.00	16.35
17	14.24	1.74	11.37	1.53	12.90	13	.....	.....	.....	.....	.....	13.00	12.90
18	15.15	1.54	9.16	3.83	11.99	13	.....	.....	.....	.....	.....	13.00	11.99
19	18.56	2.83	5.86	2.56	8.42	8	1.90	2.31	2	2.23	2	16.00	17.58
	19.55	3.72	5.08	3.47	8.55		2.25	2.73		2.57			19.31
20	8.48	.....	.....	.....	See	note.	3.58	4.35	4	.....	.....	12.00	13.05
	7.25	.....	.....	.....			4.00	4.86		.....	.....		14.58
21	7.00	6.24	1.43	8.56	9.99	11	3.19	3.87	3	.....	.....	20.00	21.60
22	12.68	1.32	11.03	2.71	13.74	13	.....	.....	.....	.....	.....	13.00	13.74

NOTE.—7204 contains 47.16 per cent. Phosphate of Lime, and F7683 50.99 per cent. Guaranteed 47 per cent. Not included in valuation.

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Stamped at	
7299	Baugh's High Grade Tobacco Manure,	Baugh & Son's Co., Baltimore, Md...	Kinston.....	23
F7682	Baugh's Baw Bone Superphosphate of Lime,	Baugh & Son's Co., Baltimore, Md...	Greensboro.....	24
7174 7194	Baugh's Special Cotton Guano	Baugh & Son's Co., Baltimore, Md...	Wilmington..... Newbern.....	25
7182	Baugh's Special Substitute for Peruvian Guano,	Baugh & Son's Co., Baltimore, Md...	Newbern.....	26
7206	Beef, Blood & Bone Fertilizer,	S. W. Travers & Co., Richmond, Va.	Greenville.....	27
7273	Berkeley's South Carolina Dissolved Bone,	Berkeley Phosphate Co., Charleston, S. C.	Monroe.....	28
7274	Berkeley Soluble Guano.....	Berkeley Phosphate Co., Charleston, S. C.	Monroe.....	29
7277	Bowker's Nassau Guano.....	Bowker Fertilizer Co., Savannah, Ga	Monroe.....	30
7290	Bradley's Patent Superphosphate of Lime,	Bradley Fertilizer Co., Boston, Mass	Franklinton.....	31
7459	British Mixture.....	Slingluff & Co., Baltimore, Md..	Asheville.....	32
7533	Broad Leaf Tobacco Guano.....	Reidsville Guano Co., Reidsville, N. C.	Reidsville.....	33
7462	Capital Bone and Potash Fertilizer,	S. W. Travers & Co., Richmond, Va.	Walnut Cove.....	34
7293	Capital Dissolved S. C. Bone...	S. W. Travers & Co., Richmond, Va.	Kinston.	35
7364	Cerealite Top Dressing with Potash,	Boykin, Carmer & Co., Baltimore, Md.	Gibson Station..	36
7507	Cerealite Top Dressing without Potash,	Boykin, Carmer & Co., Baltimore, Md.	Laurinburg.....	36a
7376 F7681	Champion Acid Phosphate.....	Richmond Chemical Works, Richmond, Va.	Concord ..... Greensboro..	37
7272 F7691	Charlotte Acid Phosphate.....	Charlotte Oil and Fertilizer Co., Charlotte, N. C.	Monroe ..... Conover	38
7220 7359 F7698	Charlotte Ammoniated Fertilizer,	Charlotte Oil and Fertilizer Co., Charlotte, N. C.	Laurinburg..... Maxton..... Conover.....	39
7312	Chesapeake Fertilizer.....	Chesapeake Guano Co., Baltimore,	Shelby	40
7323	Chesapeake Guano.....	Chesapeake Guano Co., Baltimore,	Nashville.....	41
7529	Chesapeake Guano.....	Chesapeake Guano Co., Baltimore,	Raleigh	42
7430	Chicora Acid Phosphate.....	Chicora Fert. Co., Charleston, S. C..	Winston	43
7494	Chicora High Grade Fertilizer	Chicora Fert. Co., Charleston, S. C..	McFarland.....	44
F7679	Chicora Dissolved Bone, 13 per cent.,	Chicora Fertil'zer Co., Charleston, S. C.	Greensboro.....	45
F7693	Chicora Dissolved Bone, 12 per cent.,	Chicora Fertilizer Co. ,Charleston, S. C.	Lexington.....	46
7365	Cotton Brand Ammoniated Dissolved Bone,	E. J. Powers, Wilmington, N. C.....	Waxhaw.....	47

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Nitrogen.	Equivalent to Ammonia		Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
23	13.05	2.34	7.47	1.81	9.28	8	3.17	3.85	4	2.63	2	$ 22.00	$ 23.46
24	16.74	4.48	5.56	3.76	9.32	8	2.72	3.30	2	....	.....	14.00	19.22
25	17.18	4.57	5.40	2.57	7.97	8	1.99	2.42	2	....	.....	14.00	15.23
	16.08	3.56	6.33	2.47	8.80		1.83	2.22		....	.....		15.46
26	8.97	4.27	2.44	6.22	8.66	8	4.38	5.32	5	5.07	5	28.00	29.69
27	12.58	2.64	6.14	2.21	8.35	8	2.05	2.49	2	1.90	1	15.00	17.72
28	17.40	2.47	7.91	3.01	10.92	12	.....	.....	.....	.....	.....	12.00	10.92
29	14.30	4.29	3.90	2.72	6.62	8	2.15	2.61	2½	1.21	1	16.50	15.66
30	18.00	1.34	7.96	1.10	9.06	9	1.78	2.16	2	1.41	1¼	16.25	16.95
31	12.60	1.75	6.88	2.74	9.62	9	2.14	2.60	2¼	1.47	1	16.75	18.89
32	18.70	1.15	7.69	1.46	9.15	8	1.59	1.93	2	2.37	2	16.00	17.31
33	13.23	2.75	5.44	2.95	8.39	8	1.94	2.36	2	3.42	2	16.00	18.89
34	15.82	1.45	7.04	2.99	10.03	10	.....	.....	.....	2.08	2	12.00	12.11
35	16.19	2.47	7.66	2.92	10.58	10	.....	.....	.....	.....	.....	10.00	10.58
36	5.60	.....	.....	.....	.....	.....	7.42	9.01	9	3.25	2½	29.50	30.28
36a	6.01	.....	.....	.....	.....	.....	7.46	9.06	9	.....	.....	27.00	27.18
37	15.45	2.17	7.29	2.86	10.15	10	.....	....	.....	.....	.....	10.00	10.15
	15.19	3.03	7.29	2.41	9.70		.....	.....	.....	.....	.....		9.70
38	12.95	1.10	11.32	2.50	13.82	13	.....	.....	.....	.....	.....	13.00	13.82
	17.85	1.04	9.79	3.20	12.99		.....	.....	.....	.....	.....		12.99
39	16.60	.54	6.82	2.20	9.02	8	2.00	2.43	2½	2.57	1½	17.00	18.88
	13.25	1.22	6.86	2.28	9.14		2.13	2.59		1.82			18.73
	14.46	.28	6.61	3.24	9.85		2.70	3.28		1.57			21.26
40	13.98	1.18	6.61	2.29	8.90	8	1.98	2.40	2	1.30	1	15.00	17.46
41	14.15	1.29	6.56	2.51	9.07	9	1.90	2.31	2¼	1.29	1.40	17.15	17.29
42	15.45	1.77	7.43	1.69	9.12	10	2.12	2.57	2.60	1.61	1.18	18.98	18.44
43	16.90	1.64	10.04	1.27	11.31	10	.....	.....	.....	1.42	1	11.00	12.73
44	13.23	2.42	8.34	1.10	9.44	8	2.03	2.46	2½	1.45	1	16.50	18.27
45	15.55	1.06	9.98	4.52	14.50	13	.....	.....	.....	.....	.....	13.00	14.50
46	19.04	1.19	9.34	5.59	14.93	12	.....	.....	.....	.....	.....	12.00	14.93
47	12.25	1.54	6.81	2.52	9.33	8	1.72	2.09	2	1.14	1	15.00	16.74

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
7181	Cotton Brand HighGrade Acid Phosphate,	E. J. Powers, Wilmington, N. C	Goldsboro	48
7403	Davie & Whittle Acid Phosphate,	Davie & Whittle, Petersburg, Va.....	Ashboro	49
F7666	Davie & Whittle Dissolved Bone,	Davie & Whittle, Petersburg, Va.....	Elkin	50
F7671	Davie & Whittle Dissolved Bone with Potash,	Davie & Whittle, Petersburg, Va.....	Elkin	51
7195	Diamond Acid Phosphate.....	E. H. & J. A. Meadows Co., Newbern, N. C.	Newbern.....	52
7294	Diamond Dissolved Bone	E. H. & J. A. Meadows Co., Newbern, N. C.	Kinston.....	53
7269 F7655	Diamond Soluble Bone.....	Walton & Whann Co., Wilmington, Del.	Monroe..... Salisbury.....	54
7188 7306	Dunn's Special Formula for Irish Potatoes,	Old Dominion Guano Co., Norfolk, Va.	Edenton ..... Kinston.....	55
7301 7203 F7654	Durham High Grade Acid Phosphate,	Durham Fertilizer Co., Durham, N. C.	Clinton ... . Warsaw..... Shelby.	56
7200 7242 F7659	Durham Ammoniated Fertilizer,	Durham Fertilizer Co., Durham, N. C.	Warsaw..... Laurinburg..... Salisbury	57
7424	Durham Ammoniated Fertilizer with Peruvian Guano,	Durham Fertilizer Co., Durham, N. C.	Pilot Mountain.	58
7185	Early Trucker.....	Lazaretto Guano Co., Baltimore, Md	Washington.....	59
7523	Eddystone Soluble Guano.....	Atlanta Guano Co., Atlanta, Ga.....	Oxford	60
7480	Edisto Acid Phosphate.....	Edisto Phosphate Co., Charleston, S. C.	Shelby	61
F7656	Edisto Dissolved Bone.....	Edisto Phosphate Co., Charleston, S. C.	Concord	62
F7663	Edisto Soluble Guano	Edisto Phosphate Co., Charleston, S. C.	Shelby.....	63
7276 F7696	Empire Guano.....	Rasin Fertilizer Co., Baltimore, Md.	Monroe. ..... Conover.....	64
7335	Etiwan Ammoniated Superphosphate,	Etiwan Phosphate Co., Charleston, S. C.	Gastonia	65
7320	Eureka Acid Phosphate, 12 per cent,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Wilson.	66
7333	Eureka Acid Phosphate, 10 per cent,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Charlotte	67
F7630	Eureka Acid Phosphate, Dissolved S. C. Bone,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Greensboro.....	68

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid. Found.	Total Avail. Phos. Acid. Guaranteed.	Equivalent to Ammonia Nitrogen.	Equivalent to Ammonia Found.	Equivalent to Ammonia Guaranteed.	Potash. Found.	Potash. Guaranteed.	Relative Seaboard Value Per Ton of Ingredients. Guaranteed.	Relative Seaboard Value Per Ton of Ingredients. Found.
48	13.08	1.71	9.30	2 35	11.65	11	.....	.....	.....	.....	.....	$ 11.00	$ 11.65
49	16.95	2.17	6.97	3.28	10.25	10	.....	.....	.....	.....	.....	10.00	10.25
50	13.60	3.13	8.64	4.44	13.08	12	.....	.....	.....	.....	.....	12.00	13.08
51	15.94	2.62	7.68	3.61	11.29	10	.....	.....	.....	2.41	2	12.00	13.70
52	12.98	1.36	9.70	2.67	12.37	12	.....	.....	.....	.....	.....	12.00	12.37
53	13.15	3.02	9.11	2.76	11.87	12	.....	.....	.....	.....	.....	12.00	11.87
54	14.05	2.55	10.32	2.35	12.67	13	.....	.....	.....	.....	.....	13.00	12.67
	14.38	1.51	9.98	3.75	13.73		.....	.....	.....	.....	.....		13.73
55	12.07	1.24	5.50	2.28	7.78	7	4.00	4.86	5	11.41	10	32.00	33.77
	10.80	1.23	6.28	2.23	7.51		4.13	5.01		11.00			33.54
56	13.35	2.09	8.35	4.40	12.75	10	.....	.....	.....	.....	.....	10.00	12.75
	13.80	1.78	10.50	2.33	12.83		.....	.....	.....	.....	.....		12.83
	16.02	2.03	8.06	2.38	10.44		.....	.....	.....	.....	.....		10.44
57	12.50	1.84	5.80	2.86	8.16	8	1.62	1.60	2	1.81	1½	15.50	14.77
	13.75	1.88	6.88	2.13	8.51		1.33	1.68		1.72			15.27
	14.83	1.82	5.21	3.45	8.66		1.55	1.88		2.30			16.60
58	14.30	2.03	5.72	2.16	7.88	8	2.01	2.44	2½	3.08	2	17.50	18.28
59	9.50	1.50	6.91	1.59	8.50	7	3.95	4.80	5	4.03	4	26.00	26.98
60	13.55	3.97	6.60	3.25	9.85	8	1.69	2.05	2	1.82	1	15.00	17.82
61	17.30	1.36	8.89	213	11.02	10½	.....	.....	.....	2.48	1½	12.00	13.50
62	17.45	2.43	7.74	3.84	11.58	12	.....	.....	.....	.....	.....	12.00	11.58
63	25.84	1.25	6.36	3.01	9.37	8	2.07	2.51	2	1.46	1	15.00	18.36
64	18.85	2.48	5.71	2.15	7.86	9	2.06	2.50	2½	2.10	1¾	18.25	17.46
	16.62	1.57	7.16	2.78	9.94		2.49	3.02		2.03			21.08
65	16.65	1.77	1.10	7.95	9.5	8	1.87	2.27	2	2.08	1½	15.50	17.94
66	16.45	.83	6.96	5.81	12.77	12	.....	.....	.....	.....	.....	12.00	12.77
67	14.45	1.41	6.01	4.23	10.24	10	.....	.....	.....	.....	.....	10.00	10.24
68	11.69	1.73	8.19	5.94	14.13	1	.....	.....	.....	.....	.....	13.00	14.13

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
F7692	Eureka Acid Phosphate Dissolved S. C. Bone,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Hickory	69
7390	Eureka Ammoniated Bone Superphosphate for Tobacco,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Oxford	70
7336	Eureka Ammoniated Bone Superphosphate,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Charlotte	71
F7684	Eureka Bone and Potash Compound,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Greensboro	72
7275 7351	Excellent Georgia Standard Guano,	Wilcox & Gibbs Guano Co., Charleston, S. C.	Monroe Washington	73
7388	Excellenza Soluble Guano	John S. Reese & Co., Baltimore, Md.	Franklinton	74
7167 7218	Farmer's Bone Fertilizer	F. S. Royster & Co., Tarboro, N. C.	Kinston Selma	75
7329 F7686	Farmer's Friend Fertilizer	Old Dominion Guano Co., Norfolk, Va.	Wilson Burlington	76
7461 7460	Farmer's Friend Special Tobacco Fertilizer,	Old Dominion Guano Co., Norfolk, Va.	Rockford Tarboro	77
7385	Farmer's Friend Special Fertilizer,	Old Dominion Guano Co., Norfolk, Va.	Edenton	78
7198	Farmer's Special Cotton Compound,	F. S. Royster & Co., Tarboro, N. C.	Clinton	79
7392	Farmer's Standard Ammoniated Bone,	Mount Airy Manufacturing Company, Baltimore, Md.	Oxford	80
7210	Freeman's Potato Grower	E. B. Freeman & Co., Norfolk, Va.	Greenville	81
7164	Fish Scrap	Dey & Bros., Beaufort, N. C.	Kinston	82
7257 F7677	Gem Fertilizer	Acme Manufacturing Co., Wilmington, N. C.	McFarland Wilkesboro	83
7170 7282	Gibbs & Co., High Grade Ammoniated Phosphate,	E. J. Powers, Wilmington, N C.	Wilmington Raleigh	84
7322	Gibbs & Co., High Grade Ammoniated Phosphate,	Powers, Gibbs & Co., Wilmington, N. C.	Elm City	85
7186	High Grade Premium Guano	George L. Arps & Co., Norfolk, Va.	Washington	86
7346	Honest Dollar	R. A. Woolridge & Co., Baltimore, Md.	Elm City	87
7264 7356	Imperial Acid Phosphate	Imperial Fertilizer Co, Charleston, S. C.	Morven Fayetteville	88
7260	Imperial Ammoniated Fertilizer,	Imperial Fertilizer Co., Charleston, S. C.	Morven	89
7310 F7661	Imperial Soluble Guano	Imperial Fertilizer Co., Charleston, S. C.	Shelby	90
7634	Iseley's Formula of Dissolved Bone, Potash, and Chemicals,	Boykin, Carmer & Co., Baltimore, Md.	Burlington	91
7193	Kainit	Baugh & Son's Co., Baltimore, Md.	Newbern	92

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Nitrogen.	Equivalent to Ammonia		Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
69	11.25	3.33	11.00	1.44	12.44	12	.....	.....	.....	.....	.....	$ 12.00	$ 12.44
70	15.57	1.89	7.56	2.19	9.75	8	2.11	2.56	2½	2.72	2	17.50	19.80
71	14.27	2.01	6.72	2.43	9.15	8	1.63	1.98	2	2.37	2	16.00	17.46
72	12.06	1.34	9.72	4.27	13.99	10	.....	.....	.....	3.21	2	12.00	17.23
73	13.85 12.19	3.06 2.74	5.31 5.07	3.46 4.06	8.77 9.13	8	1.64 1.67	1.99 2.03	2	1.62 1.75	1	15.00	16.36 16.97
74	18.08	.75	1.89	8.64	10.53	8½	1.91	2.32	2¼	1.45	1.20	16.45	18.94
75	16.96 16.10	.58 .50	6.81 6.63	1.22 2.03	8.03 8.66	8	1.71 1.94	2.08 2.36	2	2.30 2.82	1½	15.50	16.57 18.56
76	19.30 15.60	1.07 1.09	6.31 5.50	2.04 2.58	8.35 8.08	8	2.11 2.15	2.56 2.61	2	2.38 2.38	2	16.00	18.41 18.29
77	15.80 16.40	1.23 .81	5.44 6.23	2.46 1.53	7.90 7.76	8	2.61 2.67	3.17 3.24	3	3.41 3.50	3	20.00	20.82 20.98
78	16.00	.90	6.97	2.57	9.54	8	2.42	2.94	3	3.05	3	20.00	21.41
79	18.70	1.48	.81	8.84	9.65	8	1.66	2.02	2	1.44	1	15.00	17.15
80	11.82	1.61	6.01	2.72	8.73	8	1.71	2.08	2	1.38	1¼	15.25	16.35
81	15.90	.86	6.59	1.39	7.98	7	5.64	6.85	7	3.44	3	31.00	31.97
82	12.35	.....	.....	.....	.....	.....	7.57	9.19	9	.....	.....	27.00	27.57
83	13.68 17.53	1.54 1.14	6.03 4.80	2.46 2.38	8.49 7.18	8	1.64 2.07	1.99 2.51	2	2.74 3.07	2	16.00	17.20 17.78
84	15.85 14.30	2.58 2.07	5.35 6.63	3.33 2.16	8.68 8.79	8	1.98 1.95	2.40 2.37	2½	1.12 1.63	1	16.50	17.00 17.53
85	14.42	2.16	6.91	1.54	8.45	8	1.92	2.33	2	1.61	1	15.00	17.05
86	17.90	1.01	5.27	3.42	8.69	8	2.07	2.51	2½	1.69	1½	15.50	17.91
87	11.30	1.29	6.69	2.27	8.96	8	2.67	3.24	3½	8.03	7	25.50	26.71
88	15.55 14.10	1.33 2.61	11.01 9.83	2.01 .89	13.02 10.72	10	.....	.....	.....	.85 1.30	1	11.00	13.87 12.02
89	12.39	2.56	5.96	2.47	8.43	8¾	2.26	2.74	2½	1.46	1	17.25	18.11
90	13.65 15.67	1.77 3.41	7.10 7.42	1.76 .82	8.86 8.24	8	1.75 2.01	2.12 2.44	2	1.90 1.43	1	15.00	17.12 16.99
91	15.20	.51	6.10	1.68	7.78	8	2.52	3.06	3	5.09	3	20.00	22.05
92	6.10	.....	.....	.....	.....	.....	.....	.....	.....	12.42	12.43	12.43	12.42

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
7426	Kainit, Genuine German	Caraleigh Phosphate and Fertiliz'r Works, Raleigh, N. C.	Clayton	93
7265	Kainit, Genuine German	Imperial Fertilizer Co., Charleston, S. C.	Morven	94
7266	Kainit, Genuine German	Royal Fertilizer Co., Charleston, S. C.	Morven	95
7165	Kainit, Genuine German	E. H. & J. A. Meadows Co., Newbern, N. C.	Kinston	96
7180	Kainit, Genuine German	Calder Bros., Wilmington, N. C.	Goldsboro	97
7227	Kainit, Genuine German	Powers, Gibbs & Co., Wilmington, N. C.	Laurinburg	98
7238	Kainit, Genuine German	Wando Phosphate Co., Charleston, S. C.	Wadesboro	99
7177	Kainit, Pure German	R. N. Sweet, Wilmington, N. C.	Wilmington	100
7215	Kainit, German	Durham Fert. Co., Durham, N. C.	Wilmington	101
7231	Kainit, German	F. S. Royster & Co., Tarboro, N. C.	Falkland	102
7239	Kainit, Genuine Leopoldshall	Ashley Phosphate Co., Charleston, S. C.	Wadesboro	103
7256	Latimer's Cotton Fertilizer	Acme Manufacturing Co., Wilmington, N. C.	McFarland	104
7319	Lazaretto Acid Phosphate, 13 per cent,	Lazaretto Guano Co., Baltimore, Md.	Wilson	105
7334	Lazaretto Acid Phosphate, 12½ per cent,	G. W. Grafflin, Baltimore, Md.	Cherryville	106
7291	Lazaretto Crop Grower	Lazaretto Guano Co., Baltimore, Md.	Franklinton	107
7427	Lazaretto Crop Grower	Lazaretto Guano Co., Baltimore, Md.	Clayton	108
7452	Lazaretto Special Tobacco Fertilizer,	Lazaretto Guano Co., Baltimore, Md.	Greenville	109
7524	Lee Brand Fertilizer	J. G. Tinsley & Co., Richmond, Va.	Louisburg	110
*7448	Lee's Prepared Agricultural Lime,	A. S. Lee, Richmond, Va.	Washington	111
7169	Lister's Ammoniat'd Dissolv'd Bone Phosphate,	Lister's Agricultural and Chemical Works, Newark, N. J.	Wilmington	112
7328			Wilson	
P7660			Concord	

*7448—This fertilizer cannot be classed with regular fertilizers. Analysis of sample taken at Washington, N. C., gives—

Moisture	10.40 per cent.
Potassium Sulphate	3.99 "
Containing Potash 2.16 per cent.	
Sodium Sulphate	2.88 "
Sodium Chloride	6.34 "
Calcium Sulphate	15.15 "
Calcium Carbonate	12.25 "
Lime, as Hydrate and Oxide	21.89 "
Combined water and undetermined matter	24.07 "
	100.00

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid. Found.	Total Avail. Phos. Acid. Guaranteed.	Nitrogen.	Equivalent to Ammonia Found.	Equivalent to Ammonia Guaranteed.	Potash. Found.	Potash. Guaranteed.	Relative Seaboard Value Per Ton of Ingredients. Guaranteed.	Relative Seaboard Value Per Ton of Ingredients. Found.
93	4.60	.....	.....	.....	.....	.....	.....	.....	.....	12.86	12	$ 12.00	$ 12.86
94	4.99	.....	.....	.....	.....	.....	.....	.....	.....	12.48	12	12.00	12.48
95	5.60	.....	.....	.....	.....	.....	.....	.....	.....	12.55	12	12.00	12.55
96	7.35	.....	.....	.....	.....	.....	.....	.....	.....	12.46	12	12.00	12.46
97	9.13	.....	.....	.....	.....	.....	.....	.....	.....	13.32	12.43	12.43	13.32
98	5.00	.....	.....	.....	.....	.....	.....	.....	.....	12.42	12.43	12.43	12.42
99	4.60	.....	.....	.....	.....	.....	.....	.....	.....	12.58	10	10.00	12.58
100	4.65	.....	.....	.....	.....	.....	.....	.....	.....	12.98	12.43	12.43	12.98
101	4.80	.....	.....	.....	.....	.....	.....	.....	.....	13.10	12	12.00	13.10
102	4.30	.....	.....	.....	.....	.....	.....	.....	.....	12.20	12.43	12.43	12.20
103	5.59	.....	.....	.....	.....	.....	.....	.....	.....	12.25	11.89	11.89	12.25
104	14.70	.83	5.95	3.58	9.53	8	2.20	2.55	2½	1.95	2	17.50	19.13
105	15.13	.96	10.44	3.00	13.44	13	.....	.....	.....	.....	.....	15.00	13.44
106	18.60	.38	11.25	2.44	13.69	12½	.....	.....	.....	.....	.....	12.50	13.69
107	13.75	1.56	7.61	1.99	9.60	9	1.72	2.09	2	1.80	1½	16.50	17.67
108	14.60	1.88	7.75	1.59	9.34	9	1.70	2.06	2	1.77	1	16.00	17.29
109	16.75	1.66	4.73	4.68	9.41	9	2.66	3.23	2½	3.46	2½	19.00	22.56
110	14.30	2.57	7.16	2.26	9.42	8	1.60	1.94	2	2.04	2	16.00	17.23
111	See foot note.												
112	18.35	2.99	7.09	.92	8.01	8	1.92	2.33	2	2.29	1	15.00	17.29
	19.55	2.65	6.52	1.32	7.84		1.69	2.05		2.09			16.98
	19.21	1.82	6.56	3.47	10.03		2.06	2.50		1.95			19.48

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
7168	Lister's Success, Standard Fertilizer,	Lister's Agricultural and Chemical Works, Newark, N. J.	Wilmington	113
7175	Long's Prepared Chemicals	John S. Reese & Co., Baltimore, Md.	Wilmington	114
7504	L. & R. Ammoniated Guano	Lorentz & Rittler, Baltimore, Md.	Mount Olive	115
7208	Mapes' Manure for Potatoes	Mapes Formula and Peruvian Guano Co., New York, N. Y.	Washington	116
7191	Meadows' Cotton Guano	E. H. & J. A. Meadows Co., Newbern, N. C.	Washington	117
7190	Meadows' Special Potato Guano,	E. H. & J. A. Meadows Co., Newbern, N. C.	Washington	118
7557	Miller & Co's Ammoniated Dissolved Bone Phosphate,	H. S. Miller & Co., Newark, N. J.	Middleburg	119
7268	Nassau Dissolved Bone Phosphate,	Bowker Fertilizer Co., Savannah, Ga.	Monroe	120
7223	National Fertilizer	S. W. Travers & Co., Richmond, Va.	Laurinburg	121
7271	Navassa Acid Phosphate	Navassa Guano Co., Wilmington N. C.	Monroe	132
7377 F7685	Navassa Grain Fertilizer	Navassa Guano Co., Wilmington, N. C.	Greensboro Burlington	123
7296	Navassa Truck Guano, Soluble Ammoniated,	Navassa Guano Co., Wilmington, N. C.	Mount Olive	124
7369	N. C. Official Farmer's Alliance Acid Phosphate,	Durham Fertilizer Co., Durham, N. C.	Sanford	125
7216 7303 7339 7352 F7701	N. C. Official Farmer's Alliance Guano,	Durham Fertilizer Co., Durham, N. C.	Wilmington Kinston Cherryville Elizabeth City Greensboro	126
7207 7431	Ober's Special Compound for Tobacco,	G. Ober & Son's Co. Baltimore, Md	Greenville Mount Airy	127
7224	Ober's Special Cotton Compound,	G. Ober & Son's Co., Baltimore, Md	Laurinburg	128
7576	Ober's Standard Tobacco Fertilizer,	G. Ober & Son's Co., Baltimore, Md,	Oxford	129
7405 F7658	Old Dominion Dissolved Bone and Potash,	Old Dominion Guano Co., Norfolk, Va.	Albemarle Concord	130
7184 F7674	Old Dominion Soluble Guano	Old Dominion Guano Co., Norfolk, Va.	Washington Lexington	131
7407 7464	Old Dominion Soluble Tobacco Guano.	Old Dominion Guano Co., Norfolk, Va.	Lexington Rockford	132
7337	Orient Complete Manure	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Charlotte	133
7544	Orient Complete Manure for Tobacco,	Atlantic and Virginia Fertilizing Co., Richmond, Va.	Kernersville	134
7449	Orinoco Tobacco Guano	F. S. Royster & Co., Tarboro, N. C.	Greenville	135

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Nitrogen.	Equivalent to Ammonia		Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
113	18.90	3.63	6.68	1.50	8.18	8	1.80	2.19	2	2.24	1	$ 15.00	$ 16.99
114	16.60	.28	13.28	1.34	14.62	13	.....	.....	.....	2.61	2	15.00	17.23
115	13.95	2.03	5.85	2.18	8.03	8	1.66	2.02	2	2.20	1	15.00	16.29
116	11.75	1.22	7.27	.98	8.25	8	3.88	4.71	4½	7.30	6	27.50	29.68
117	16.85	1.43	6.29	2.39	8 68	8	1.86	2.26	2¼	2.46	2	16.75	17.92
118	13.50	2.03	5.51	1.89	7.40	7	4.00	4.86	5	8.30	8	30.00	30.28
119	11.10	1.94	6.82	1.65	8.47	8	1.80	2.19	2	1.41	1⅛	15.33	16.45
120	14.45	2.80	11.13	1.08	12.21	13	.....	.....	.....	.....	.....	13.00	12.21
121	15.20	3.38	5.54	3 11	8.65	8	1.83	2.22	2	2.35	2	16.00	17.66
122	17.20	2.33	10.55	1.63	12.18	12	.....	.....	.....	.....	.....	12.00	12.18
123	14.25	3.12	5.03	4.02	9.05	8	1.88	2.28	2	2.40	2	16.00	18.29
	16.52	3.15	5 88	3.55	9.43		2.04	2.48		2.95			19.82
124	11.85	1.37	5.50	2.12	7.62	6	3.42	4.15	4	9.72	10	28.00	29.79
125	18.20	.35	10.85	1.91	12.76	13	.....	.....	.....	.....	.....	13.00	12.76
126	17.50	1.28	1.77	7.50	9.27	8	1.84	2.23	2½	2.60	3	18.50	18.56
	15.70	1.51	6.26	1.83	8.09		1.99	2.42		3.21			18.56
	15.30	.92	6.93	2.29	9.22		1.89	2.29		3.70			18.79
	17.05	.95	6.95	1.75	8.70		2.12	2.57		3.15			19.56
	11.30	1.79	5.11	2.70	8.14		2.03	2.46		3.31			18.83
127	15.58	2.02	7.42	1.82	9.24	8	2.25	2.73	2½	3.55	2	17.50	20.78
	15.90	3 07	6.68	1.58	8.26		2.26	2.74		3.51			19.99
128	16.95	1.57	7.28	1.90	9.18	8	1.95	2.37	2	1.89	1.40	15.40	18.18
129	15.21	2.48	6.68	2.46	9.14	8	2.17	2.63	2	1.48	1.40	15.40	18.51
130	18.01	.74	5.01	3.52	8.53	8½	.....	.....	.....	2.31	2	10.50	10.84
	14.31	.36	5.36	2.87	8.43		.....	.....	.....	2.83			11.26
131	17.10	1.02	6.46	1.83	8.29	8	2.17	2.63	2¼	2.49	2	16.75	18.67
	15.88	.81	6.01	2.00	8.01		2.05	2.49		3.28			18.76
132	16.90	.95	6.74	1.96	8.50	8¼	2.06	2.50	2¼	2.93	2	17.00	18.93
	13.20	1.18	6.35	2.51	8.86		1.91	2.32		3.04			18.86
133	13.60	2.34	6.32	2.62	8.94	8	1.68	2.04	2	1.86	1	15.00	16.92
134	14.87	2.87	5.16	2.54	7.70	8	1.84	2.23	2¼	2.38	2	16.75	16.77
135	19.73	1.45	5.33	2.53	7.86	8	2.18	2.65	2	3.17	3	17.00	18.98

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
7212 } F7675 }	Owl Brand Guano	Davie & Whittle, Petersburg, Va	Smithfield Elkin	136
7499 } 7406 } 7423 }	Owl Brand Special Tobacco Guano,	Davie & Whittle, Petersburg, Va	Mebane Ruffin Pilot Mountain.	137
7387	Owl Brand Tobacco Plant Guano,	Davie & Whittle, Petersburg, Va	Oxford	138
7179	Patapsco Guano	Patapsco Guano Co., Baltimore, Md.	Goldsboro	139
7522	Peruvian Mixture	American Fertilizer Co., Norfolk, Va.	Louisburg	140
7393	Piedmont Guano for Tobacco.	Mount Airy Manufacturing Company, Baltimore, Md.	Oxford	141
7172 } 7189 }	Pine Island Ammoniated Phosphate,	Quinnipiac Co., New York, N. Y	Wilmington Washington	142
7234 } F7662 }	Plow Brand Raw Bone Superphosphate,	Walton & Whann Co., Wilmington, Del.	Washington Salisbury	143
7575	Plow Brand Raw Bone Superphosphate for Tobacco,	Walton & Whann Co., Wilmington, Del.	Oxford	144
7209	Pocomoke Superphosphate	E. B. Freeman & Co., Norfolk, Va.	Washington	145
F7672	Poindexter's Dissolved Bone and Potash,	Chicora Fertilizer Co., Charleston, S. C.	Winston	146
7162	Powell's Green Bag Fertilizer for Potatoes,	W. S. Powell & Co., Baltimore, Md.	Kinston	147
7161	Powell's Potato Producer	W. S. Powell & Co., Baltimore, Md.	Kinston	148
7420	Progressive Farmer Guano	Durham Fert Co., Durham, N. C.	Liberty	149
7166 } 7302 }	Prolific Cotton Grower	Goldsboro Oil Co., Goldsboro, N. C.	Kinston Kinston	150
7347	Quick Step	R. A. Wooldridge & Co., Baltimore, Md.	Elizabeth City	151
7386	Raleigh Standard Guano	Raleigh Oil Mills and Fertilizer Co., Raleigh, N. C.	Franklinton	152
F7670	Rasin Acid Phosphate	Rasin Fertilizer Co., Baltimore, Md	Thomasville	153
7419 } F7669 }	Reese's Dissolved Bone Phosphate,	John S. Reese & Co., Baltimore, Md	Ore Hill Thomasville	154
7281 } F7702 }	Reese's Pacific Guano	John S. Reese & Co., Baltimore, Md	Wilmington Conover	155
F7665	Reid's Dissolved Bone	Chicora Fertilizer Co., Charleston, S. C.	Winston	156
7538	Reliance Ammoniated Superphosphate,	Walton & Whann Co., Wilmington, Del.	Winston	157
7525	Richmond Brand Fertilizer	J. G. Tinsley & Co., Richmond, Va.	Youngsville	158
7225 } F7708 }	Royal Acid Phosphate with out Potash,	Royal Fertilizer Co., Charleston, S. C.	Laurinburg Concord	159

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Equivalent to Ammonia			Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.	Nitrogen.	Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
136	21.27	1.39	6.18	2.47	8.65	8	1.85	2.25	2	1.38	1	$ 15.00	$ 16.78
	12.91	2.75	5.12	2.68	7.80		2.13	2.59		1.80			17.37
137	16.80	1.58	6.30	2.01	8.01	8	2.00	2.43	2¼	1.95	1¾	16.50	17.25
	18.55	2.32	5.41	2.11	7.52		2.14	2.60		1.95			17.27
	10.90	2.03	5.85	2.57	8.20		2.04	2.48		1.86			17.50
138	18.55	1.68	6.59	2.31	8.90	8	2.04	2.48	2¼	1.49	1¾	16.50	17.83
139	13.89	1.11	7.78	1.46	9.24	9¼	2.11	2.56	2½	1.70	1¼	18.00	18.82
140	18.15	.74	6.70	1.80	8.50	8	1.90	2.31	2	2.52	1½	15.50	17.95
141	11.80	1.34	6.38	2.36	8.74	8	2.17	2.63	2½	5.09	3	18.50	19.72
142	12.40	1.29	6.77	1.70	8.47	8	2.00	2.43	2	1.60	1	15.00	17.36
	17.60	1.01	6.25	2.93	9.18		1.96	2.38		1.37			17.67
143	11.50	3.07	6.05	3.21	9.26	9	2.31	2.80	2½	2.18	1¾	18.25	19.84
	14.32	2.66	4.16	5.18	9.34		2.47	3.00		2.96			21.80
144	11.57	2.61	6.14	1.96	8.10	9	2.37	2.88	2½	2.30	1¾	18.25	19.04
145	15.10	1.47	7.65	1.97	9.62	8½	1.70	2.06	2	1.68	1½	16.00	17.48
146	16.93	.83	10.00	.91	10.91	10	.....	.....	.....	2.91	1	11.00	13.86
147	9.98	1.55	3.51	2.38	5.89	5	4.11	4.99	6	8.03	8	31.00	28.92
148	11.68	2.06	1.15	5.81	6.96	7	2.50	3.04	2½	3.96	3	17.50	20.04
149	18.45	1.60	.51	8.97	9.48	8	1.90	2.31	2	1.91	1½	15.50	18.32
150	12.54	1.07	7.41	1.68	9.09	8	2.04	2.48	2½	2.37	2	17.50	18.90
	15.39	1.56	7.07	1.80	8.87		2.32	2.82		3.62			20.95
151	13.08	1.46	7.01	2.08	9.09	8	2.62	3.18	2½	3.95	3½	19.00	22.58
152	12.45	1.60	4.96	3.30	8.26	8	2.49	3.02	2¾	2.81	2	18.25	20.13
153	12.85	.93	11.00	2.54	13.54	14	.....	.....	.....	.....	.....	14.00	13.54
154	13.94	1.01	11.19	2.18	13.37	13¼	.....	.....	.....	.....	.....	13.25	13.37
	15.27	1.02	9.72	2.02	12.30		.....	.....	.....	.....	.....		12.34
155	11.57	1.18	2.21	7.64	9.85	8½	1.80	2.19	2¼	1.57	1.20	16.45	17.99
	20.01	1.55	4.71	5.77	10.48		1.94	2.36		1.45			19.01
156	14.28	.86	11.51	1.95	13.46	12	.....	.....	.....	.....	.....	12.00	13.46
157	14.70	1.13	6.73	2.20	8.93	8	1.86	1.89	2	1.97	1½	15.50	16.57
158	15.10	2.71	7.07	1.40	8.47	8	1.58	1.92	2	1.25	1	15.00	15.48
159	14.55	2.87	9.70	2.40	12.10	13	.....	.....	.....	.....	.....	13.00	12.10
	14.36	3.84	9.34	3.21	12.55		.....	.....	.....	.....	.....		12.55

Station Number.	Name of Brand.	Name of Manufacttrer or Agent.	Sampled at	
7492 7536	Royal Acid Phosphate with Potash,	Royal Fertilizer Co., Charleston, S. C.	Wadesboro Salisbury	160
7221	Royal Ammoniated Fertilizer	Royal Fertilizer Co., Charleston, S. C.	Laurinburg	161
7261 F7710	Royal Soluble Guano	Royal Fertilizer Co., Charleston, S. C.	Morven Concord	162
7709	Royal Dissolved Bone	Royal Fertilizer Co., Charleston, S. C.	Concord	163
7295 7418	Royster's High Grade Acid Phosphate, 13 per cent,*	Old Dominion Guano Co., Norfolk, Va.	Kinston Newbern	164
7404 7425 7540 F7657	Royster's High Grade Acid Phosphate, 12 per cent,	Old Dominion Guano Co., Norfolk, Va.	Lexington Sanford Winston Concord	165
7173	Sea Fowl Guano "B. D."	William L. Bradley, Boston, Mass.	Wilmington	166
F7687	Special Grain Guano	Acme Manufacturing Co., Wilmington, N, C.	Burlington	167
7163	Special Guano for all Crops	E. H. & J. A. Meadows Co., Newbern, N. C.	Newbern	168
7374	Standard Bone Phosphate	Tygert Allen Fertilizer Co., Philadelphia, Pa.	Edenton	169
7375	Standard Cotton Grower	Alex. Morgan & Co., Norfolk, Va.	Edenton	170
F7695	Standard Fertilizer Success	Lister's Agricultural and Chemical Works, Newark, N. J.	Lexington	171
7340 7321 F7678	Star Brand Guano	Allison & Addison, Richmond, Va.	Lincolnton Wilson Lexington	172
7233	Star Brand Special Tobacco Manure,	Allison & Addison, Richmond, Va.	Rocky Mount	173
F7664	Stonewall Brand Acid Phosphate,	J. G. Tinsley & Co., Richmond, Va.	Winston	174
7509	Stonewall Brand Fertilizer	J. G. Tinsley & Co., Richmond, Va.	Selma	175
7468	Stonewall Tobacco Fertilizer	J. G. Tinsley & Co., Richmond, Va.	Raleigh	176
7223	Stono Acid Phosphate	Stono Phosphate Co., Charleston, S. C.	McFarland	177
7250 7363	Stono Soluble Guano	Stono Phosphate Works, Charleston, S. C.	McFarland Rowland	178
7453	Tinsley's Tobacco Fertilizer	J. G. Tinsley & Co., Richmond, Va.	Wilson	179
7199	Trucker's Delight	F. S. Royster & Co., Tarboro, N. C.	Clinton	180
7344	Truck Farmer's Special Guano	Wilcox & Gibbs Guano Co., Charleston, S. C.	Washington	181

*The Old Dominion Guano claim that 13 per cent. sacks were used by error for 12 per cent. sacks.

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Nitrogen.	Equivalent to Ammonia		Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
160	15.05	2.49	9.43	2.13	11.56	10	.....	.....	.....	1.22	1	$ 11.00	$ 12.78
	16.50	2.53	9.93	1.91	11.84		.....	.....	.....	.86			12.70
161	15.00	1.64	6.84	2.65	9.49	8¾	2.32	2.82	2½	1.71	1	17.25	19.66
162	18.25	2.29	6.55	2.05	8.60	8	1.78	2.16	2	1.31	1	15.00	16.39
	14.28	2.56	5.71	3.40	9.11		1.66	2.02		2.28			17.45
163	12.92	2.98	10.75	.32	11.07	12	.....	.....	.....	.....	.....	12.00	11.07
164	15.53	1.25	6.36	4.07	10.43	13	.....	.....	.....	.....	.....	13.00	10.43
	16.65	1.33	6.19	3.99	10.18		.....	.....	.....	.....	.....		10.18
165	19.00	1.56	6.58	4.21	10.79	12	.....	.....	.....	.....	.....	12.00	10.79
	15.01	1.01	6.47	4.61	11.08		.....	.....	.....	.....	.....		11.08
	13.93	.72	11.50	1.01	12.51		.....	.....	.....	.....	.....		12.51
	15.77	1.54	7.96	4.93	12.89		.....	.....	.....	.....	.....		12.89
166	19.25	1.56	6.29	3.40	9.69	9	1.93	2.34	2¼	1.15	1	16.75	17.86
167	14.79	1.66	4.18	5.44	9.62	9	2.40	2.91	2	1.27	1	16.00	19.62
168	13.20	2.87	6.23	3.04	9.27	9	2.05	2.49	2½	2.73	2½	19.00	19.47
169	13.85	2.21	5.67	2.35	8.02	8	1.73	2.10	2	2.39	2	16.00	16.71
170	17.00	1.66	4.87	3.10	7.97	8	2.08	2.53	2	2.02	2	16.00	17.58
171	19.06	2.94	5.86	2.23	8.09	8	1.82	2.21	2	2.75	1	15.00	17.47
172	19.68	.87	7.07	1.48	8.55	8	1.91	2.32	2	1.14	1¼	15.25	16.65
	13.65	1.51	5.88	1.88	7.76		1.83	2.22		1.40			15.82
	17.68	1.34	5.50	2.90	8.40		2.06	2.50		1.83			17.73
173	15.70	.82	7.65	1.99	9.64	9	2.41	2.93	2¾	1.25	1¼	18.50	19.68
174	15.07	2.10	8.19	3.10	11.29	10	.....	.....	.....	.....	.....	10.00	11.29
175	13.50	2.41	7.55	1.80	9.35	8	1.71	2.08	2	2.52	2	16.00	18.11
176	13.57	2.23	8.58	.35	8.93	8	1.56	1.89	2	2.75	2	16.00	17.35
177	16.38	.72	9.14	1.77	10.91	10	.....	.....	.....	1.79	1	11.00	12.70
178	14.50	3.29	6.74	1.66	8.40	8	2.05	2.49	2½	1.06	1	16.50	16.93
	16.47	2.37	7.45	1.43	8.88		2.13	2.59		2.40			20.05
179	13.00	1.46	6.73	2.17	8.90	8	3.58	4.35	4	3.59	2½	22.50	25.54
180	15.05	.86	6.72	1.78	8.50	8	2.81	3.41	4	3.92	4	24.00	22.05
181	19.80	.03	9.45	.50	9.95	10	3.30	4.01	4	4.27	4	26.00	26.25

Station Number.	Name of Brand.	Name of Manufacturer or Agent.	Sampled at	
7421	Vinco Guano for Tobacco.....	Davie & Whittle, Petersburg, Va....	Pilot Mountain.	182
7262	Wagener & Co's Acid Phosphate,	F. W. Wagener & Co., Charleston, S. C.	Morven	183
7258	Wagener & Co's High Grade Ammoniated Fertilizer,	F. W. Wagener & Co., Charleston, S. C.	Morven	184
7800	Walker's Ammoniated Phosphate,	Joshua Walker, Baltimore, Md.....	Clinton	185
F7690	Wando Acid Phosphate	Wando Phosphate Co., Charleston, S. C.	Conover.....	186
7498 / F7697	Wando Soluble Guano.....	Wando Phosphate Co., Charleston, S. C.	Mebane ..... Conover.....	187
7226	Wilcox, Gibbs & Co's High Grade Acid Phosphate,	Wilcox & Gibbs Guano Co., Charleston, S. C.	Laurinburg.....	188
7222	Wilcox, Gibbs & Co's Manipulated Guano,	Wilcox & Gibbs Guano Co., Charleston, S. C.	Laurinburg.....	189
7315	Wilcox, Gibbs & Co's Superphosphate,	Wilcox & Gibbs Guano Co., Charleston, S. C.	Mount Holly.....	190
7526	Yancey's Celebrated Corn Fertilizer,	Boykin, Carmer & Co., Baltimore, Md.	Middleburg.....	191
7578	Yancey's Formula for Tobacco	Boykin, Carmer & Co., Baltimore, Md.	Middleburg.....	192
7219	Zell's Ammoniated Bone Superphosphate,	Zell's Guano Co., Baltimore, Md....	Laurinburg.....	193
7637	Zell's Special Compound for Tobacco,	Zell's Guano Co., Baltimore, Md....	Winston	194

	Water.	Insoluble Phos. Acid.	Soluble Phos. Acid.	Reverted Phos. Acid.	Total Avail. Phos. Acid.		Nitrogen.	Equivalent to Ammonia		Potash.		Relative Seaboard Value Per Ton of Ingredients.	
					Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.	Guaranteed.	Found.
182	16.67	2.01	5.55	2.67	8.22	8	1.92	2.33	2	1.43	1	$ 15.00	$ 16.64
183	17.55	1.15	10.48	1.44	11.92	10	.....	.....	.....	1.22	1	11.00	13.14
184	14.15	1.77	7.85	1.60	9.45	8	2.69	3.27	2½	1.50	1	16.50	20.76
185	21.10	2.32	5.91	2.44	8.35	9	2.22	2.70	2½	2.04	1¾	18.25	18.49
186	13.60	2.33	9.26	2.55	11.81	11½	.....	.....	.....	.....	.....	11.50	11.81
187	12.45 11.76	3.94 3.84	7.06 6.63	2.15 2.07	9.21 8.70	9	1.90 2.09	2.31 2.54	2¼	1.68 2.58	1½	17.25	17.82 18.90
188	15.42	1.29	11.59	2.69	14.28	13	.....	.....	.....	.....	.....	13.00	14.28
189	15.32	1.56	5.59	3.20	8.79	8	2.10	2.55	2½	2.52	2	17.50	18.96
190	12.90	3.76	4.46	4.16	8.62	9	.....	.....	.....	2.98	3	12.00	11.60
191	13.63	.10	7.45	1.57	9.02	8	2.43	2.95	3	8.24	7	24.00	26.11
192	13.90	.60	6.59	1.05	7.64	8	2.19	2.66	3	3.06	2	19.00	18.66
193	16.35	2.35	7.13	2.00	9.13	8	1.84	2.23	2	1.58	1	15.00	17.40
194	13.95	2.92	5.97	2.28	8.25	8	1.82	2.21	2	2.35	2	16.00	17.23

OFFICIAL FERTILIZER ANALYSES,

SPRING AND FALL SAMPLES OF 1892.